

WILL EMPOWERMENT OF USAF PROGRAM MANAGERS MITIGATE THE ACQUISITIONS CRISIS

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General Studies

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

WILL EMPOWERMENT OF USAF PROGRAM MANAGERS MITIGATE THE ACQUISITIONS CRISIS, by Maj Matthew J. Van Gilder, 81 pages.

For decades, the Defense Acquisition System has been criticized for its inability to provide timely and cost effective products. Significant cost overruns in programs have created tension between the DoD and Congress, especially when it comes to continued program or new program funding. This thesis will look at the idea of empowering USAF program managers as a mitigation strategy to help decrease overall program costs. Empowerment is shown to work with private industry in reducing costs. This thesis will look at the feasibility, acceptability, and suitability of implementing these same empowerment methods within the USAF. A review of government reports and documents concerning the status of acquisitions along with a top-level review of empowerment provide the data pool for examination. The use of qualitative review software provided the data analysis processing to quantify the data into meaningful categories for review. Data review showed empowerment was a feasible method for mitigating the acquisition crisis; however, current methods would be unacceptable without significant changes to current acquisition processes.

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ACRONYMS

BBP	Better Buying Power
DAS	Defense Acquisition System
DAU	Defense Acquisition University
DoD	Department of Defense
FAR	Federal Acquisition Regulations
GAO	Government Accountability Office
MDAP	Major Defense Acquisition Program
USAF	United States Air Force

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CHAPTER 1

INTRODUCTION

USAF Acquisitions Introduction

“All of the responsibility and none of the authority,” this phrase is a common source of frustration among program managers in the United States Air Force (USAF).¹ Charged with responsibility for the success of the entire program, program managers often feel they are not empowered enough to affect their own programs. A more accurate description of a program manager’s job is they are delegated program responsibility but not given the commensurate authority over their budget, team, and other factors to actually run the project. The Government Accountability Office (GAO),² along with many other organizations, including Congress in their 2016 National Defense Authorization Act,³ is looking to the Department of Defense (DoD) to empower their program managers. Both GAO and Congress believe empowerment of the program manager will help solve the acquisition crisis within the Defense Acquisition System (DAS).

¹ Government Accountability Office (GAO), GAO-06-110, *Best Practices: Better Support of Weapons Systems Program Managers Needed to Improve Outcome* (Washington, DC: GAO, November 2005), 5.

² Ibid

³ National Defense Authorization Act, 114th Cong., 1st sess., 2015, 3-4.

Over the past 50 years, the DoD invested in several different strategies in order to reform their acquisition processes.⁴ While some marked improvement occurred, for the most part, the DoD is discussing the same issues today as it was 20 years ago.⁵ The main issue is significant cost overruns on large programs, referred to as Major Defense Acquisition Programs (MDAPs). As much as \$300 billion⁶ in cost overruns on these MDAPs occurred in DoD between 1990 and now. This thesis defines the USAF acquisition crisis as these cost overruns.

Thesis Statement

Through the empowerment of their program managers, the USAF will mitigate the ongoing acquisition crisis. As cost overruns in MDAPs continue to be a source of contention between the DoD and Congress, it is imperative the DoD develop and implement an acquisition process, which enables more accurate cost projections and enables their workforce. Key to this enablement is the program manager, who, as the lead government agent, has overall program responsibility. Empowerment is not the complete solution to ongoing acquisition crisis within DoD; it may, however, provide a way ahead for the USAF to begin the process of reforming acquisitions to meet the requirements set forth by Congress.

⁴ Government Accountability Office (GAO), GAO-14-145T, *Defense Acquisitions Where Should Reform Aim Next* (Washington, DC: GAO, October 2013), 1.

⁵ Ibid

⁶ Institute for Defense Analysis (IDA), IDA Paper P-4531, *The Major Causes of Cost Growth in Defense Acquisition, Volume I: Executive Summary* (Alexandria, VA: Institute for Defense Analysis, December 2009), ES-1.

Primary Research Question

Will empowerment of USAF program managers mitigate the acquisition crisis?

The answer to this primary question will provide the USAF some initial recommendations as to whether the pursuit of additional study, resources, and implementation will positively affect USAF acquisitions. Additionally, the answer to this question will help support or refute some current acquisition trends and theories discussed in subsequent chapters.

Supporting Research Questions

What methods can the USAF use to empower its program managers to mitigate the ongoing acquisition crisis? Answers to this secondary question will provide the USAF some initial recommendations to acquisition guidance slated to achieve program management empowerment. The answer will also provide specific areas for further investigation for new policy initiatives.

Are the empowerment methods feasible, suitable, and acceptable for incorporation into the USAF acquisition process? There are several similarities between program management in the DoD and in the private sector; however, there are several key differences. A major key difference is in the private sector, once approved, a project is typically fully funded, or there is at minimum a commitment from senior management to funding.⁷ For the DoD, even with senior leadership commitment, funding is annual and, even if approved, amount of funding is at the discretion of Congress. Therefore, while a best practice in the private sector acquisition community is to fully fund a project

⁷ Government Accountability Office, GAO-06-110, 5-8.

from the onset, this not feasible for the USAF. This fundamental difference in funding is an example as to why any empowerment method must be feasible, suitable, and acceptable to implementation within the USAF despite it having advantages in the private sector.

Assumptions

Several assumptions frame the information and conclusions provided within this thesis. A key assumption is the USAF will not make any changes to how they use program managers if change would require a Congressional update to the Federal Acquisition Regulations (FAR). The secondary research questions address both congressional updates and any limitations as described below. As a government organization, Congressional law defines and constrains the USAF acquisition process.

Another assumption is any manpower changes will have to be minor in scope and easily implementable. Any empowerment methods that require a complete overhaul of the acquisition personnel management process or which do not fit into the USAF personnel management process as a whole is considered impractical. Additionally, any empowerment models, which conclude solid funding up front as the requirement for success will not be suitable to use within the USAF. Since Congress yearly appropriates funding, program managers cannot depend upon full funding commitments for the entire life of the program.

Limitations

Several factors limit this research. First, to keep this thesis relevant to current trends and issues, all data was limited to publishing dates from 2005 through 2015.

Several completed studies already provide detailed descriptions of the DoDs and the USAFs acquisition reforms of the past few decades. This data provided context and findings to several of the research reports referenced within this thesis; therefore, further historical research would be redundant.

A second limiting factor is time. This thesis is limited to the amount of time as proscribed by the Army's Command and General Staff Colleges academic calendar and therefore a more comprehensive review of published data is not achievable. A third limiting factor is thesis length and format as proscribed and adhered to in accordance with Student Text 20-10.

Lastly, this research is limited to applicability for the DoD. Large amounts of data and research exists on project management and best practices for a program manager to achieve program success. However, Congressional regulations limit the DoD acquisition process and thus limit the research and data applicability for use or implementation within the DoD. The DoD must abide by all regulations as set forth in the FAR; program managers can be held criminally liable for any violations of the FAR. All of these limitations provide the framework, which guide this thesis in data inclusion, research methodology and overall conclusions and recommendations.

Defining Terms

Acquisition: The conceptualization, initiation, design, development, testing, contracting, production, deployment, Logistics Support, modification, and disposal of

weapons and other systems, supplies, or services (including construction) to satisfy DoD needs, intended for use in, or in support of, military missions.⁸

Cost Growth: A term related to the net change of an estimated or actual amount over a base figure previously established. The base must be relatable to a program, project, or contract and be clearly identified, including source, approval authority, specific items included, specific assumptions made, date, and the amount.⁹

Defense Acquisition University (DAU): Authorized by Title 10 U.S.C. § 1746, and chartered by DoD Directive 5000.57, the DAU provides practitioner training, career management, and services to enable the Defense Acquisition Workforce to make smart business decisions and deliver timely and affordable capabilities to the warfighter. DAU provides a full range of basic, intermediate, and advanced curricula training, as well as assignment-specific and continuous learning courses to support DoD career goals and professional development.¹⁰

Delegation: Assigning an employee (usually a subordinate), a specific task, or tasks to complete.¹¹

⁸ Gary Hogan, *Glossary of Defense Acquisition Acronyms and Terms*, 15th ed. (Fort Belvoir, VA: Defense Acquisition University Press, 2012), 2.

⁹ Ibid., 50.

¹⁰ Ibid., 61.

¹¹ Defense Acquisition University, *Program Managers Tool Kit*, 16th ed. (Fort Belvoir, VA: Defense Acquisitions University, January 2011), 106.

Empowerment: Assigning an employee or team responsibility and authority to take actions and make decisions in pursuit of the organization's goals.¹²

Major Defense Acquisition Program (MDAP): An acquisition program designated by the Under Secretary of Defense for Acquisition, Technology and Logistics as an MDAP; or estimated to require an eventual total expenditure for Research, Development, Test, and Evaluation, including all planned increments, of more than \$365 million in Fiscal Year (FY) 2000 constant dollars or, for procurement, including all planned increments, of more than \$2.19 billion in FY 2000 constant dollars.¹³

Milestone: (1) The point at which a recommendation is made and approval sought regarding starting or continuing an acquisition program, i.e., proceeding to the next phase. Milestones established by DoD Instruction 5000.02 are: Milestone A that approves entry into the Technology Development phase; Milestone B, which is officially program approval, approves entry into the Engineering and Manufacturing Development phase; and Milestone C that approves entry into the Production and Deployment phase. (2) In the context of scheduling, a specific definable accomplishment in the contract network that is recognizable at a particular point in time. Milestones have zero duration, do not consume resources, and have defined entry and exit criteria. A milestone may mark the start and/or finish of an interim step, event, or program phase.¹⁴

¹² Ibid

¹³ Hogan, 133.

¹⁴ Ibid., 141.

Program Management: The process whereby a single leader exercises centralized authority and responsibility for planning, organizing, staffing, controlling, and leading the combined efforts of participating/assigned civilian and military personnel and organizations, for the management of a specific defense acquisition program or programs, throughout the system life cycle.¹⁵

Program Manager: Designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs. The program manager shall be accountable for credible cost, schedule, and performance reporting to the Milestone Decision Authority.¹⁶

Significance of Study

The results of this study will be beneficial to the improvement of the acquisition process within the USAF. Pressure from Congress to fix the DAS within all the services is going to continue to affect relations between Congress and DoD.¹⁷ By providing a foundation of knowledge for the implementation of empowerment within the constraints of the FAR, this study will provide recommendations and suggestions for further research and study.

¹⁵ Hogan, 180.

¹⁶ Ibid

¹⁷ National Defense Authorization Act, 114th Cong., 1st sess., 2015, 3-4.

Summary

This chapter provides a short overview of USAF acquisitions and how cost overruns are one of the main challenges facing the DAS. Empowerment is one of many possible solutions in which the USAF may mitigate cost overruns within their acquisition portfolios and especially within MDAPs. Working within the constraints of DoD acquisition processes, a key requirement for any empowerment strategy will be the considerations of the unique requirements placed upon the DoD program manager. Any strategy, which is non-implementable as required by the FAR, is unfeasible for application within this thesis. Chapter 2 will provide a more detailed description of the acquisition crisis, USAF acquisitions, and empowerment.

CHAPTER 2

LITERATURE REVIEW

This chapter is broken into three areas of review; USAF Acquisitions Crisis and Acquisition Reform, USAF Acquisitions, and Empowerment. These areas of review provide background for the primary research question: will empowerment of USAF program managers mitigate the acquisition crisis? The first section provides an overview of the USAF Acquisitions crisis and reforms. This section covers a brief history of what the crisis is, past trends to fix the crisis, and current efforts to fix the crisis. The second section provides an overview of USAF Acquisitions as a process and a career. This section defines how the USAF conducts acquisitions and manages their acquisition personnel. The last section provides a brief history on empowerment, the theory of the two types of empowerment, an overview of how DoD is currently looking at empowerment.

These three sections provide the necessary framework and background required to understand the current situation of USAF acquisitions. The first two sections provide the understanding for answering the secondary research questions of what empowerment methods may be feasible, suitable, and acceptable for incorporation into the USAF acquisition process. These sections give the context into what the USAF has done in the past as part of acquisition reform as well as context into how USAF manages their acquisition processes. The primary research question; will empowerment of USAF program managers mitigate the acquisition crisis, is used to provide framework to section three in this chapter. This section will provide information on current empowerment methods and their implementation.

USAF Acquisitions Crisis and Acquisition Reform

USAF Acquisitions Crisis Overview

Chapter 1 briefly described what, for the purposes of this thesis, the main issue of DoD acquisitions is; cost overruns that are prevalent in several of the DoDs MDAPs. For the purposes of this thesis, the definition of the USAF acquisitions crisis is the historical and current trend of MDAPs having significant cost growth over initial cost estimates as provided at Milestone B. Several studies conducted both by government and independent sources confirm cost overruns have been an issue for DoD for at least 50 years.¹⁸

Consolidation of the several studies shows cost overruns tend to have a range between 25-45 percent over initial cost estimates. Lack of clarity as to an exact number is attributable to several factors.

Program cost estimates are difficult to provide and therefore cost growth, especially when comparing to another program, require a comprehensive review of program costs to ensure clarity in comparison. DAU provides cost estimating in most of its program management courses as well as course specifically for cost.¹⁹ One easy form of misunderstanding is when comparing program costs, which are not using the same base fiscal year. Inflation drives cost increases and when comparing a \$30 million program in 1995 to a \$30 million program in 2015 if the program costs are not adjusted, incorrect conclusions are drawn. Another issue in program costs comparison stems from differences in consideration of what is part of the end item cost.

¹⁸ Government Accountability Office (GAO), GAO-14-145T, 1.

¹⁹ Defense Acquisition University, course list and descriptions, accessed 11 November 2015, www.dau.mil.

The end item refers to the production product when assembled, or completed and ready for deployment or fielding.²⁰ Figure 1 shows a high-level breakdown of the different types of costs found in most acquisition programs. An issue of accurate cost comparison comes with different programs using different types of costs when asked to provide an end item cost. DoD has taken some action to prevent this confusion with initiatives such as Cost As an Independent Variable and by making cost a key performance parameter.²¹ Both of these initiatives require the program manager independently justify costs outside of everything else in the program. While this makes accurate program cost estimation more possible in the future, historical cost comparisons remain difficult.

²⁰ Hogan, 76.

²¹ Defense Acquisition University, *Program Managers Tool Kit*.

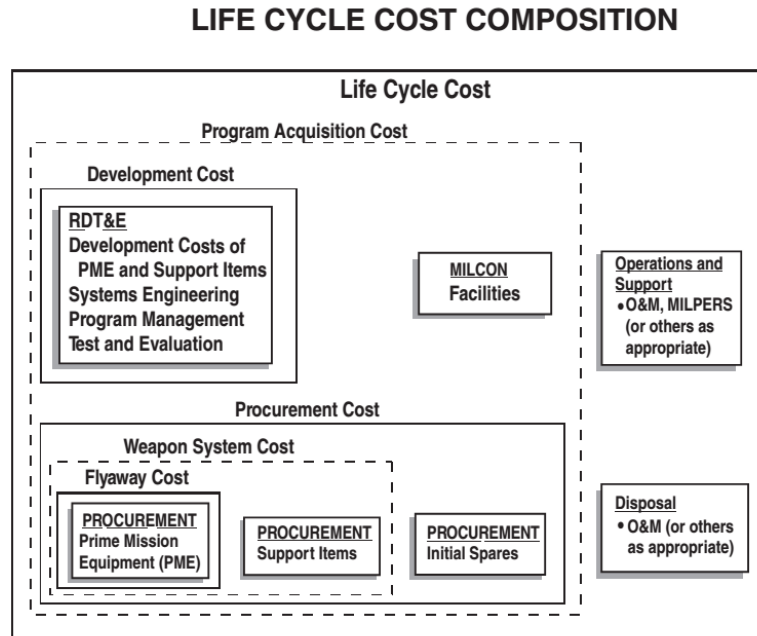


Figure 1. Life Cycle Cost Composition

Source: Defense Acquisition University, *Program Managers Tool Kit*, 16th ed. (Fort Belvoir, VA: Defense Acquisitions University: January 2011), 27.

Cost comparisons can create confusion when comparing costs across an individual program or across multiple programs, however, there are many other issues related to cost growth. It is possible to categorize cost growth into two main causes.²² The first is weakness in management visibility, direction, and oversight. The second is weakness in initial program definition and costing. To address these cost growth issues the DoD has been continually working improve the acquisition processes through several reform initiatives.

²² Institute for Defense Analysis (IDA), IDA Paper P-4531, *The Major Causes of Cost Growth in Defense Acquisition Volume I: Executive Summary* (Alexandria, VA: IDA, December 2009), ES-6.

Acquisition Reform Overview

The history of acquisition reforms throughout all of DoD is a comprehensively researched topic. One of the most referenced sources is a book by J. Fox;²³ his work is in several GAO reports. His book covers 32 different acquisition reform initiatives from 1960-2002 and 27 major studies on defense acquisitions from 1960-2009. His research found that these 27 major studies conducted over a fifty-year period provide mostly the same findings and recommendations.²⁴

The conclusions provided by Mr. Fox's study show several trends and issues across DoD acquisitions. MDAPs take ten years or longer to produce end items, which provide less capability than planned while at two to three times the initial cost estimate.²⁵ Most importantly for this thesis, are his discussions on program managers. The description of the fundamental differences between industry and government program managers show industry has success with managers who have genuine decision-making authority.²⁶ Finally, he concludes with the major changes, which are needed in the way DoD manages their program managers, specifically with how long they stay with a program, or there will be little tangible results from any additional acquisition reforms.²⁷

²³ J. Fox, *Defense Acquisition Reform 1960-2009 an Elusive Goal* (Washington, DC: Center of Military History United States Army, 2011).

²⁴ Ibid., xi.

²⁵ Ibid., 189.

²⁶ Ibid., 198.

²⁷ Ibid., 207.

Much of the senior government and commercial defense acquisition community echo the conclusions drawn from Mr. Fox's book, published in 2009; a 2014 Senate investigation report²⁸ on acquisition reform included statements by 31 leading acquisition professionals. The Senate Permanent Subcommittee on Investigations sent a letter out to several government and industry senior leaders. They asked for information in five categories; culture and accountability, acquisition policy, procurement policy, budgeting and resource allocation, and the requirement process.²⁹ Appendix A shows the Senate letter, suggested topic questions, and the overarching responses from the community.

The responses from the senior acquisition community showed four themes.³⁰ The first two of these themes are applicable to this thesis. The third theme on realistic requirements and budgets, however, is worth mentioning as this theme relates directly to the acquisition crisis of cost overruns. The report states "requirements creep," the tendency to continue to add additional requirements after the product baseline is set, is a major factor in cost overruns.³¹

The first theme addressed in the Senate report is the need to incentivize the acquisition workforce. Several of the experts responses concluded that the current DAS

²⁸ Senate Permanent Subcommittee on Investigations, *Defense Acquisition Reform: Where do we go from here? A Compendium of Views by Leading Experts*, 113th Cong., 1st sess., 2014, S. Rep., 1.

²⁹ *Ibid.*, 200.

³⁰ *Ibid.*, 1.

³¹ *Ibid.*, 3.

does not and cannot hold program managers responsible for acquisition failures.³² They conclude that turnover among program managers, most of whom are not in the position long enough to see a major milestone or deployment of the system, means DoD cannot hold them accountable for program failure, as to where the blame lies is indeterminable.³³ DoD has worked to combat this issue with a policy in 2007, which requires Senior Acquisition Executives to sign a four-year commitment to the position; however, the respondents in this Senate report felt the enforcement of this policy is an issue within the current DAS.³⁴

The second major theme addressed was attracting and training a qualified acquisition workforce. Congress has worked to help the DoD in this area with programs such as the Defense Acquisition Workforce Development Fund, which Congress established in 2008 to ensure the acquisition workforce has the skills to ensure the DOD receives the best value for taxpayer dollars.³⁵ However, even with these initiatives 70 percent of the studies' respondents felt more steps need to be taken. The respondents also felt a stable acquisition workforce, which has the same promotion potential as their operational counterparts would help remove any stigma of the acquisitions career field being a dead end.³⁶ Overall, this study provides diverse opinions and views from multiple

³² Ibid., 1-2.

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid.

³⁶ Ibid.

viewpoints within the entire DAS and its inclusion is important to understand the current environment of the DAS.

Lastly, thoroughly addressing current acquisition reform is not complete without including an overview of the Undersecretary of Defense for Acquisition Technology and Acquisitions' Better Buying Power (BBP) initiative. Started in 2010, BBP:

Encompasses a set of fundamental acquisition principles to achieve greater efficiencies through affordability, cost control, elimination of unproductive processes and bureaucracy, and promotion of competition. BBP initiatives also incentivize productivity and innovation in industry and Government, and improve tradecraft in the acquisition of services.³⁷

BBP is broken into seven focus areas.³⁸

1. Achieve affordable programs.
2. Control cost throughout the product lifecycle.
3. Incentivize productivity and innovation in industry and government.
4. Eliminate unproductive processes and bureaucracy.
5. Promote effective competition.
6. Improve tradecraft in acquisition of services.
7. Improve the professionalism of the total acquisition workforce.

To date the BBP initiative provided three implementations to the DAS; BBP 1.0 September 2010, BBP 2.0 November 2012, and BBP 3.0 April 2015. Each subsequent implementation builds upon the previous by both refining ongoing directives and presenting new ones. The actual effectiveness of these initiatives is debatable. Mr.

³⁷ Better Buying Power, "Better Buying Power," accessed December 5, 2015, <http://bbp.dau.mil/index.html>.

³⁸ Ibid.

Kendall, Under Secretary of Defense for Acquisition, Technology, and Logistics, who is responsible for the BBP program testified before the Senate Armed Services committee in 2014 stating, “The evidence, in terms of major program costs and schedule slips, shows very little statistical change.”³⁹

In this testimony, Mr. Kendall draws three conclusions:

1. Fixing the DAS is not easy.
2. Changes take time and we need to sustain initiatives longer.
3. Defense acquisitions are a human endeavor and the past may have focused too much on organizational and policy changes.

However, Mr. Kendall reiterates that while the BBP initiative has shown some improvements, the DoD will continue to refine their approach.⁴⁰ He also addresses the need to change the culture of the DAS from one that values spending to one in which controlling costs are encouraged.

USAF Acquisitions

The USAF compared to the other services within DoD has a unique uniformed military manpower implementation within the acquisition career field. For the Navy, Army, and Marine Corps, officers will typically work within their respective services for approximately 7 to 10 years before making the transition into the acquisition career

³⁹ Claudette Roulo, “Kendal: Initiative Aids DoD Acquisitions Culture Change,” *DoD News, Defense Media Activity*, July 10, 2014, accessed November 25, 2015, <http://www.defense.gov/DesktopModules/ArticleCS/>.

⁴⁰ Ibid.

field.⁴¹ The USAF is the only service within DoD to bring officers into the acquisition career field as 2nd Lieutenants.⁴² This approach to service acquisitions provides many challenges and benefits.

USAF acquisition officers, especially within the junior officer ranks, lack operational experience. This can cause issues within an acquisition program, as program managers may not understand the nature or environment for the use of the end state product they are acquiring. In this case, it is possible to acquire items that will technically fulfill the requirement as written but fail to meet the operational need. The USAF works to overcome this experience issue in different ways; first through a comprehensive career-field training plan, and through a recommended career job path in which opportunities for operational assignments are encouraged.⁴³ For an USAF officer designated as a program manager Table 1 provides a quick overview of the expected training and timelines required to progress in the career field.

⁴¹ Department of the Navy, “Career Management,” accessed April 2, 2016, <http://www.secnave.navy.mil/rda/workforce/Documents/navymilitaryacquisitioncareerpath>; Department of the Army, Pamphlet 600-3, *Commissioned Officer Professional Development and Career Management* (Washington, DC: Department of the Army, December 2014), 440.

⁴² Department of the Air Force, *Acquisition Managers (63AX & 1101); Career Field Education and Training Plan*. (Washington, DC: Department of the Air Force, August 2012).

⁴³ *Ibid.*, 26.

Table 1. Acquisition Management Approximate Training Flow (Accessions)

Grade	Acquisition Experience	Class/Training Description
	0-3 Months	Complete AFIT FAM 103 initials skills course (ACQ 101 equivalent)
	2-12 Months	Complete SYS 101, CLB 007, and CLB 016; Complete DAU Core Plus/AFIT classes for continuous learning
	12 Months	Apply for Program Management Level I certification
	1-36 Months	Complete all Initial Acquisition Assignment core training tasks and those non-core tasks required by your supervisor
	12-18 Months	Complete ACQ 201A and ACQ 201B
	12-24 Months	Complete CON 115, and SAM 101 or IRM 101; Complete DAU Core Plus/AFIT classes for continuous learning
GS-11 & Below	12-24 Months	Attend Civilian Acculturation Leadership Training (CALT)
	12-36 Months	Attend Acquisition Leadership Challenge Program - Beginnings (ALCP - B) (Civilians)
	18-24 Months	Complete AFIT IPM 301 or PMT 251 & 257; IPM 301 fulfills PMT 251 & 257
	24 Months	Apply for Program Management Level II certification
	24-36 Months	Complete AFIT IPM 301 if not taken to fulfill PMT 251 and PMT 257
	37 Months-10 Years	Complete all 2nd/3rd Acquisition Assignment core training tasks and those non-core tasks required by your supervisor
O-3/GS-12		Complete Primary Developmental Education
	4-8 Years	Complete BCF 102, BCF 103, LOG 103, and SYS 202; Complete DAU Core Plus/AFIT classes for continuous learning
O-3-O-4/GS-12-GS-13		Attend Acquisition Leadership Challenge Program I (ALCP - I)
O-4/GS-13		Complete Intermediate Developmental Education
O-5/GS-14		Attend Acquisition Leadership Challenge Program II (ALCP - II)
	8+ Years*	Complete PMT 352A and PMT 352B; Apply for Program Management Level III certification
	Job Specific	If assigned to an ACAT III PM position, complete PMT 400 if applicable
O-5/GS-14		Attend Acquisition Leadership Challenge Program III (ALCP - III)
O-5-O-6/GS-14-GS-15		Complete Senior Developmental Education; Apply for PMT 401 nomination for development towards ACAT I/II PM/DPM positions
	Job Specific	If assigned as ACAT I/II PM/DPM, complete PMT 401 if not already completed; Complete PMT 402 (prerequisites: PMT 401, PMT 301, or PMT 302)

* If assigned to a PM Level III position (Priority 1 students), complete PMT 352A/B as soon as prerequisites are complete. PMT 352B has limited quotas and is based on the number of PM Level III positions.

Source: Department of the Air Force, *Acquisition Managers (63AX & 1101); Career Field Education and Training Plan* (Washington, DC: Department of the Air Force, August 2012), 26.

This training overview roadmaps a plan to have the USAF acquisition program manager fully qualified, as required by DoD, to begin running MDAP level programs around the rank of Colonel. However, as mentioned in chapter 1, lack of empowerment is

a major source of frustration for most program managers.⁴⁴ Figure 2 provides a description of the responsibilities for a USAF program manager. The first two responsibilities listed dictate a program manager is responsible and accountable for their program. However, nowhere does a requirement state a program manager has the authority to manage their program. This disconnect is a key gap between having program managers who have not only have the capability to lead their program but also have the necessary authority to manage their entire team.

2.6. Program Manager (PM) will:

2.6.1. Be accountable for assigned programs through the ILCM governance chain of authority on all matters of program cost, schedule, risk, and performance.

2.6.2. Be responsible for program execution and deliver systems that meet documented user requirements while seeking to minimize costs and improve readiness throughout the life cycle.

2.6.3. Ensure assigned programs comply with all applicable statutes, executive orders, DoD issuances, AF publications, FAR, Defense Federal Acquisition Regulation Supplement (DFARS), Air Force Federal Acquisition Regulation Supplement (AFFARS), and the requirements in this publication.

2.6.4. Develop appropriate programmatic documentation as required by this and other applicable instructions. Ensure the programmatic documentation is coordinated with all applicable stakeholders. Maintain programmatic documentation throughout the life cycle of the system in accordance with this and other instructions.

2.6.5. Develop tailored and executable program strategies and documentation, appropriate for the program risk, for approval by the MDA.

2.6.6. Propose waivers and deviations as needed to streamline and execute the assigned program.

Figure 2. USAF Program Manager Responsibilities

Source: Department of the Air Force, Air Force Instruction (AFI) 63-101, *Integrated Life Cycle Management*, accessed November 2, 2015, <http://www.e-publishing.af.mil/>.

⁴⁴ Government Accountability Office, GAO-06-110, 5.

The USAF spends a lot of money on programs to increase capability. For fiscal year 2015 the USAF budgeted for over 25 billion in acquisition funding split into five major areas; aircraft, space, missiles, research and development, and command control communication computer and intelligence systems.⁴⁵ For the DoD as a whole, the break down between MDAP level programs and non-MDAP is 45 percent MDAP and 55 percent non-MDAP.⁴⁶ While most of the information provided on the acquisition crisis refers to MDAP programs and their cost overruns, the fact that 55 percent of the acquisition budget focuses on non-MDAP means any solution to the acquisition crisis should cover all levels of program management and all levels of program managers.

Empowerment

Empowerment of employees is a business trend that began to appear regularly in the United States during the 1980s.⁴⁷ As global competition pressured American industry to improve quality, many firms choose empowerment programs as a method to meet quality needs. Much of the current research for employee empowerment finds several increased benefits to empowerment; innovativeness, job satisfaction, attitude, and performance. Gretchen Spreitzer has been writing on empowerment for over a decade

⁴⁵ Office of the Undersecretary of Defense (Comptroller)/ Chief Financial Officer, "Program Acquisition cost by Weapons System," March 2014, accessed 21 April 2016, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2015/fy2015_Weapons.pdf, 1-2.

⁴⁶ Ibid., 3.

⁴⁷ Sergio Fernandez and Tima Moldogaziev, "Employee Empowerment, Employee Attitudes, and Performance: Testing a Causal Model," *Public Administration Review* 73, no. 3 (2013): 490.

and her work over the last twenty years of empowerment provides a comprehensive overview in which to give context for this thesis. Classically, empowerment has two types, social-structural empowerment, and psychological empowerment.⁴⁸

In social-structural empowerment there is a sharing powers between managers and workers, at all levels, the goal is allowing the lower levels to have relevant decision-making authority.⁴⁹ This type of empowerment would be included in an organization, which provide these practices; participative decision-making, skill and knowledge-based pay, open flow of information, flat organizational structures (decentralized span of control), and training.⁵⁰ To put this type of empowerment in other terms; social-structural empowerment is empowerment through processes, procedures, and other tangible strategies. Missing from this model is the actual experiences of the employee as to whether or not they feel empowered.⁵¹

The second empowerment model is psychological empowerment, which is empowerment focused on how a person experiences their work.⁵² According to Spreitzer⁵³ psychological empowerment is made up of four dimensions. These four

⁴⁸ Gretchen Spreitzer, *Taking Stock: A review of more than twenty years of research on Empowerment at Work* (Ann Arbor, MI: Ross School of Business, 2007), 3-8.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

dimensions are required for an employee to feel empowered; lack in any one area limits the overall experience. The four dimensions, perhaps better referred to as categories of fulfillment and motivation for their work, an employee must experience to feel empowered are; meaning, competence, self-determination, and impact. While social-structural empowerment focuses on the organization through policies and procedures, psychological empowerment focuses on the individual, a need for both is required to understand how to empower employees at work.⁵⁴

To complete an overview of empowerment, a look at the negative aspects of empowerment are required. One key negative aspect of empowerment is the theory that empowerment is a ruse managers use to increase employee outputs without compensation.⁵⁵ Another impact is actually that empowerment may create additional control measures; in an effort to control power or restrict the amount of power an employee can wield thus minimizing potential loss. Conversely to empowerment theory, empowerment may actually increase employee stress as they feel their peers monitor them more closely.

Other empowerment researchers echo the themes discussed above. While the lack of willingness by senior leadership to give up power for empowerment of their employees, sometimes the issue lies with the employees not wanting to be empowered.⁵⁶ Another researcher concurs that empowerment increases job performance and furthers the

⁵⁴ Ibid.

⁵⁵ Ibid., 22.

⁵⁶ Martin Tillman, "Help my Team Won't Accept Empowerment," *Defense Acquisition and Logistics* (May-June 2004): 32-35.

research by providing details about the increased job satisfaction shown by empowered employees.⁵⁷ Lastly, other research concurs that empowerment increases employee commitment but breaks this down further to distinguish between two types of commitment.⁵⁸ There is affective commitment which does increase with corresponding empowerment and continuance commitment which varied depending on the demographics of the surveyed.⁵⁹ Overall, empowerment research continues to show mostly positive trends when used to increase employee performance.

Empowerment in the USAF and DoD

There has been some discussion about implementing empowerment for program managers in USAF and DoD. One major document, which outlines this, is a 2007 report to congress on program manager empowerment and accountability.⁶⁰ This report divides into two separate initiative areas referred to as “Big A” and “little a”, see figure 3. The “Big A” addresses program requirements, funding, and acquisition processes; “little A” address the environment in which the program manager operates.⁶¹

⁵⁷ Fernandez, 2013.

⁵⁸ Anita Liu, W. M. Chiu, and Richard Fellows. “Enhancing Commitment through Work Empowerment,” *Engineering, Construction and Architectural Management* 14, no. 6 (2007): 1, 9.

⁵⁹ Ibid.

⁶⁰ Under Secretary of Defense for Acquisition, Technology and Logistics, *Report to Congress on Program Manager Empowerment and Accountability* (Washington, DC: Under Secretary of Defense for Acquisition, Technology and Logistics, August 2007).

⁶¹ Ibid., 6-9.

Strategy for Program Manager Empowerment and Accountability

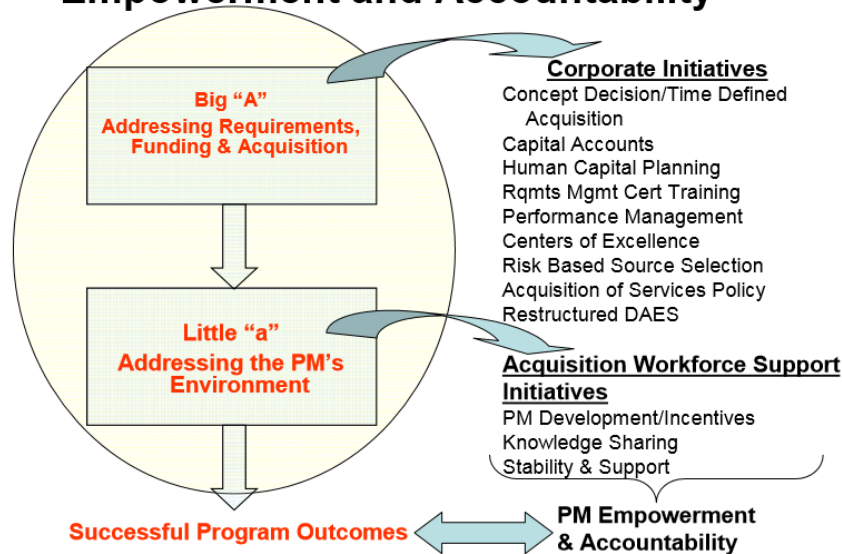


Figure 3. DoD Comprehensive Strategy

Source: Under Secretary of Defense for Acquisition, Technology and Logistics, *Report to Congress on Program Manager Empowerment and Accountability* (Washington, DC: Under Secretary of Defense for Acquisition, Technology and Logistics, August 2007), 6.

This 2007 report was a required response by the DoD to congress by Section 853 to address the qualifications, resources, responsibilities, tenure, and accountability of program managers before and after Milestone B.⁶² Additionally, within this reports' attachment 1, is a matrix showing the nine matters Section 853 required to be addressed. This matrix then shows the Under Secretary of Defense, Acquisition, Technology, and Logistics response to these nine matters in the forms of current or planned initiatives. It is interesting to note that even with these initiatives in 2007 there is still a call by Congress

⁶² Ibid., 18.

in 2015 to implement program manager empowerment.⁶³ Within the scope of this thesis and the resulting data found throughout this research, there are many documents, which mention program manager empowerment as necessary and beneficial item. However, there is very little documentation on how to actually achieve this empowerment within DoD. The goal of this thesis is to help address this topic of USAF program manager empowerment and its implementation.

Summary

This chapter covered three areas; USAF Acquisitions Crisis and Acquisition Reform, USAF Acquisitions, and Empowerment. The first section provided an overview of the Acquisitions crisis and a quick summary of the reforms, which include the implementation within DoD up to 2015. The second section provided an overview of USAF Acquisitions as a manpower process and a career. The material reviewed provided an overview of specific USAF program manager career progression and their responsibilities and requirements. The last section provides a brief history on empowerment, the theory of the two types of empowerment, an overview of how DoD is currently looking at empowerment.

⁶³ National Defense Authorization Act, 3-4.

CHAPTER 3

RESEARCH METHODOLOGY

The primary purpose of this chapter is to define how to conduct the research for this thesis. This chapter will define the methodology incorporated, why this methodology is appropriate, how the data is gathered, and the methodology for data analysis. The primary research question, will empowerment of USAF program managers mitigate the acquisition crisis, limits the scope of data analyzed. Since this research focuses primarily on government processes and information, most of the material selected was from government reports and documentation. The major exception is in the area of empowerment theory and methods, where little government information exists.

Methodology

This thesis paper will use qualitative research methods in order to frame the literature as described in chapter 2. Qualitative research is applicable for this study based upon the definition provided by John Creswell.⁶⁴ He states we use qualitative research when a problem or issue needs examination. For this thesis, the problem examined is what empowerment methods the USAF can use. Additionally, use of qualitative research allows the researcher to provide the context and settings for the conduction of the research provided.⁶⁵

⁶⁴ Creswell, 39-40.

⁶⁵ Ibid.

Within the definition of qualitative research, this thesis will use case study research as the design to conduct this study. Case study research “involves the study of an issue, explored through one or more cases within a bounded system.”⁶⁶ Case research has consistently been one of the most powerful research methods in operations management.⁶⁷ Using case study allows answers to the questions of what, why, and how, with a good understanding of the complexity of the entire phenomenon.⁶⁸ Additionally, case study research is good for early theory building and testing, especially when some of the variables are unknown or the phenomenon is not readily understandable.⁶⁹

Within this scope of understanding for a case study research methodology, case study lends itself well to this thesis as answering the primary research question is understanding, and either proving or disproving, the theory that empowerment is a mitigation to the acquisition crisis. This thesis takes two outwardly unrelated topics, empowerment, and USAF acquisitions, and combines them into a single research area. Case study research is bounded and for this thesis, the topic is bounded in several areas as defined in chapter 1, limitations. Specifically this research is bounded in time to within the past decade and within the scope of applicability as related to inclusion with the USAF manpower system. Bounding of data within a case study is critical as “arguments

⁶⁶ Ibid., 73.

⁶⁷ Chris Voss, Nikos Tsikriktsis, and Mark Frohlich, “Case Research: Case Research in Operations Management,” *International Journal of Operations and Production Management* 22, no. 2 (2002): 195.

⁶⁸ Ibid., 197.

⁶⁹ Ibid.

that strive for great breadth and boundedness are in greater need of cross-unit cases; causal arguments restricted to a small set of units more plausibly subsist on the basis of a single-unit study.”⁷⁰ In other words, the bounding of a case study to relevant information creates a plausible basis for the conclusions drawn within the scope of research conducted.

As with any research, the inclusion of bias impacts on behalf of the researcher needs addressing; bias in research refers to study quality or trustworthiness.⁷¹ To achieve study quality a qualitative researcher must address five responsibilities; a clearly written research question, why case study design is appropriate for this research, purposeful sampling strategies appropriate for case study are applied, systematic data collection and management, and correct analysis of the collected data with conclusions consisting of a logical process of data interpretation.⁷² This chapter will address all five of these responsibilities.

To address the first responsibility of the qualitative researcher, a clearly written research question, is the adjudication process required for completing this thesis. A committee to ensure clarity and academic rigor reviews the research question, methodology, and all other aspects of this thesis. The second responsibility, the question

⁷⁰ John Gerring, Nikos Tsikriktsis, and Mark Frohlich, “What Is a Case Study and What Is It Good For?,” *The American Political Science Review* 98, no. 2 (May 2004): 341-54.

⁷¹ Pamela Baxter and Susan Jack, “Qualitative Case Study Methodology: Study Design and Implementation for Novice Researcher,” *The Qualitative Report* 13, no. 4 (December 2008): 556.

⁷² Ibid.

of whether case study design being appropriate for this thesis, is addressed above through the review of case study research and how it is appropriate for this thesis. The third responsibility, purposeful appropriate sampling strategies, is achieved by the sampling of data used to make up this case study comes from multiple sources. The majority of information and data for the government acquisition process comes from government publications and regulations. For the information covering empowerment, samples are from government sources and from private company data and research showing methods, benefits, and shortfalls of empowerment.

To achieve the fourth responsibility, systematic data collection and analysis, conduction of this thesis's data analysis is via a qualitative research software. Specifics for this collection is in the following section which covers the use of NVivo software and its analysis capabilities. Achievement of proper analysis is through interpretation of the data results from data collection. Interpretation will consist of discussion of common trends and themes found throughout the data. In addition, discussion of the comparison of the data to already existing research, such as Appendix A, is in chapter 4.

The use of comparison to other existing research helps achieve the fifth responsibility, correct data analysis of qualitative research, as laid out by Baxter and Jack. Comparison of any conclusions drawn from the data collection and analysis to existing research helps to determine legitimacy. Recommendations for any additional areas of study and recommendations for any empowerment methods are qualified in discussion with the first and secondary research questions. Lastly, use of comparison to related research addresses the findings found in this research; specifically, the comparison of this

research to the findings found in the government report on senior acquisition insights and concerns.⁷³

Another aspect of eliminating researcher bias is to look at the research bias from the four standpoints of; credibility, transferability, dependability, and confirmability.⁷⁴ Credibility refers to the accurate description and interpretation of the data.⁷⁵ To maintain credibility for this thesis, this thesis uses a thesis review committee. Transferability is the ability to transfer research findings from one group to another.⁷⁶ This is a key aspect for this thesis and covered in the discussion of data results and their interpretation specifically with respect to industry empowerment methods and their applicability to USAF program management.

Dependability occurs if another researcher can follow the same decision trail used by the initial researcher.⁷⁷ Chapter 3 and chapter 4 cover the entire data analysis and results process, which allow another researcher to clearly follow the entire research process. The final standpoint of confirmability is established when credibility, transferability, and dependability are all included in the researchers' presentation.⁷⁸ This

⁷³ Senate Permanent Subcommittee on Investigations, *Defense Acquisition Reform: Where do we go from here? A Compendium of Views by Leading Experts*, 113th Cong., 1st sess., 2014, S. Rep., 1.

⁷⁴ Eileen Thomas and Joan K. Magilvy, "Qualitative Rigor or Research Validity in Qualitative Research," *Journal for Specialists in Pediatric Nursing* 16 (2011): 151.

⁷⁵ *Ibid.*, 152-153.

⁷⁶ *Ibid.*, 153.

⁷⁷ *Ibid.*

⁷⁸ *Ibid.*, 154.

thesis establishes all three other standpoints as discussed and thus provides the confirmability of the research conducted.

NVivo Software Use in Qualitative Research

In order to achieve the goal of systematic data collection, provided below are the detailed steps for the use of a qualitative computer software analysis tool in the conduction of chapter 2 data trend and theme analysis. Aiding in the identification of these common themes specifically is the use of NVivo software. The use of NVivo provides many advantages, improves the quality of quantitative research, and provides expert results.⁷⁹ NVivo is a qualitative data analysis computer software package, produced by Qualitative Software Research International.⁸⁰ Covered in this section are both the advantages and disadvantages of the use of a qualitative data analysis software.

The advantages to the use of a qualitative data analysis software are multifold. NVivo software will help; manage data, manage ideas, query data, visualize data, and report from the data.⁸¹ Furthermore, with a thorough understanding of the data analysis software and its capabilities, the researcher can provide additional rigor through completeness checks and negative case tests.⁸² The advantages of the use of NVivo

⁷⁹ AlYahmady Hilal and Saleh Alabri, "Using NVivo for Data Analysis in Qualitative Research," *International Interdisciplinary Journal of Education* 2, no. 2 (January 2013): 181-186.

⁸⁰ Bazely and Jackson, "Perspectives: Qualitative Computing and NVivo," accessed December 12, 2015, http://download.qsrinternational.com/Document/Website/QualitativeData-Analysis-with-NVivo_Chapters-1-and-2.pdf, 1-3.

⁸¹ Ibid., 6-10.

⁸² Ibid.

software to analyze the literature discussed in chapter 2 provide this thesis a detailed analysis with respect to the primary research question.

There are also issues and concerns, which need addressing when using a qualitative data analysis software. For instance, the perception of computers increasing the rigor and subjectivity of a researcher's analysis is misleading.⁸³ The effectiveness of the analysis of the data is still dependent upon the researcher and their ability to properly use the software, and interpret the results. The quality of the software used can additionally limit or enhance the data analysis process. One method used to achieve quality results is to break down data software analysis concerns into four mains areas.⁸⁴ These four areas are; computers can distance researchers from their data, using code-and-retrieve methods to the exclusion of other analysis, fear that computer use will mechanize the analysis, and the misperception computers support only grounded theory methodology.⁸⁵

To reduce these analysis concerns, a review of this thesis by a committee familiar with qualitative research, who will provide feedback on data analysis quality, is used. Additionally, the main research question is not to provide a definitive response as to the only solution to the acquisition crisis. The purpose is in conjunction with the secondary research questions to provide an answer as to if empowerment is something the USAF should pursue. Therefore, the achievement of risk reduction in the use of a qualitative

⁸³ Ibid.

⁸⁴ Ibid.

⁸⁵ Ibid.

data analysis software for common themes and methods is through thesis committee review and research question discussion. Analysis of these empowerment themes and methods in the context of the supporting research questions, feasibility, suitability, and acceptability along with possible methods, produces recommendations for the USAF and future implementation. This secondary analysis will further enhance the initial data analysis results.

Overarching Data Analysis Steps for the use of NVivo

The data analysis steps described below is unique to this thesis; however, other researchers who use NVivo support similar methodologies. In one study, the researchers broke the use of NVivo into seven different research technique categories some of which are: word count, classical content analysis, and keywords-in-context.⁸⁶ For the keywords-in-context category the authors discuss the importance of utilizing multiple key words because the use of too few results in a loss of content.⁸⁷ They also describe the use of classical content analysis, which uses the NVivo capability of content analysis for trends and themes.⁸⁸ Described below is the use of similar methods in the conduction of this research.

The data analysis in NVivo, at a macro level, will take place using the following steps, development of which was in conjunction with this research. First, all data will be

⁸⁶ Nancy Leech, and Anthony J. Onwuegbuzie, "Beyond Constant Comparison Qualitative Data Analysis: Using NVivo." *School of Psychology Quarterly* 26, no. 1 (2011): 70-84.

⁸⁷ Ibid., 75-76.

⁸⁸ Ibid., 76-77.

loaded in the NVivo software and then analyzed as a whole data set. The use of the NVivo auto code function provides a result of different trends and themes. Second, the resulting trends or themes, which emerge, help to initially categorize the data in sets. Third, these data sets will then be individually auto analyzed, using the same auto code function as in step one, for independent themes within the categorization.

Fourth, any additional sub-set analysis will occur as required to help answer the research questions. Fifth, the NVivo software allows the use of queries for specific words or statements. The use of this NVivo query feature then generates a separate report within each category for key terms such as empower, crisis, or issue. Sixth and lastly, conclusions will be drawn from a combination of the auto analyzed data trends and themes with the individual queries to produce overall results and conclusions of the research.

Summary

This chapter provided an overview of the methodology employed in the development of this thesis. A description of the specific type of qualitative research design, explanatory case study, was justified as appropriate for this research topic and approach. This justification comes from the chapters addressing of common issues with qualitative research⁸⁹ and common issues with software analysis.⁹⁰ Also addressed were the numerous issues and concerns raised by the use of qualitative research and the biases, which can influence qualitative research. To address these concerns and issues this

⁸⁹ Baxter and Jack, 556.

⁹⁰ Bazely and Jackson, 1-3.

chapter provides a thorough understanding of researcher biases as discussed and how the conduction of this research excluded those biases. Furthermore, this chapter addressed the advantages and disadvantages of the use of NVivo software as a qualitative research computer data analysis tool to enhance the analysis of the literature reviewed.

CHAPTER 4

ANALYSIS

The purpose of this chapter will be to provide a detailed review of the data analyzed in a logical format to help determine answers to the primary and secondary research questions. The section on trends and themes will cover the initial coding of the data into different categories, which are broken out separately to address the different areas of research conducted. Addressed next is the initial analysis of those categories for common trends. It will continue with the further analyzation of the data in the different categories looking for common themes. These themes provide the data required to conclude answers to the research questions.

As mentioned before previous research into the DAS has shown an agreement among senior DoD leadership and other acquisition experts that a major overhaul of the DAS is required. This relates directly to the primary research question: will empowerment help solve the acquisition crisis? The analysis performed on recent reports and expert testimony shows there is a correlation between program manager empowerment and superior acquisition results.

Trends and Themes

The use of NVivo as a data analysis tool for qualitative research was beneficial in this thesis by providing a quick search tool for all of the input data for trends and themes. As discussed in chapter 3 the data was initially loaded into NVivo as one set. Using NVivo built in data analysis coding tools to query the input data, categories of data began to emerge. The results of this initial analysis led to the development of five categories for

data sorting. The resulting categories were; government reports, acquisition issues, empowerment research, government regulations, and expert testimony. Appendix B provides a synchronization matrix of all the analyzed documents and into which of the five categories they were included. These categories were not exclusive and some documents populated multiple categories, and as such, some documents required manual re-code at the conduction of each analysis.

The Five Categories

The first category, government reports, looks for any literature collected from government entities that addressed DoD acquisitions related to program management based upon the limitations addressed in chapter 1. The purpose of this category was to determine what the government was saying about DoD acquisitions; the results will help answer the primary and secondary research questions. For this thesis, the majority of information in this category came from GAO reports. The second category, acquisition issues, used any data collected, which directly addressed the acquisition crisis. This category looked at any information from the selected sources about what the cause was of, and or the solution to, the USAF acquisition crisis is. The evaluated results for this category address the primary research question.

The third category, empowerment research, includes any data, which addresses the theories or results of employee empowerment. The data includes papers or journal articles published on empowerment; trends and themes discovered help answer the primary and secondary research questions. The fourth category, government regulations, contains any data, which regulates the authorities of USAF program managers. Further analysis for trends and themes proved unproductive; therefore, the information included

in this category only helps address the secondary research questions. The fifth category, expert testimony, was a consolidation of any literature, which included senior DoD acquisition leadership opinions, industry expert opinions, and congressional testimony. The purpose of this category is to determine common themes and messages relating to program managers and the acquisition crisis. The results address the primary and secondary research questions.

After coding the data into the five initial categories, there was an analysis of each category individually using NVivo built in analysis tools for common subjects within the category. Appendix C provides a consolidated section for these results. The tables describe resulting information from the NVivo auto coding function as follows. The relevant, as to this thesis, common subjects are the column headings in the tables. The numbers in each column are the number of times each of the common subjects appeared within the applicable documents for that category.

Along with the tables, the results of the analysis performed in each category resulted in a separate “subject results” word document, automatically generated by NVivo. These documents created an organized data display by including each subject term, the original source document, and the corresponding surrounding text in the source document. There are several similarities in the common subjects found within each category however; the resultant “subject results” word documents are unique within each category. These documents were hundreds of pages apiece and therefore not included within this thesis. A comparison of these “subject results” documents to the word query results, detailed below, provide an overarching trend and theme resultant for that category. Discussion of these results is below within each category.

The next step of data analysis came from an individual word query within the applicable category. Conduction of independent word queries focused on key terms such as; empower, issues, problem, method, and responsibility provided corresponding data. Similar to the “subject results” word documents, each independent word query also produces a word document including the term, source document, and corresponding surrounding text. The evaluation of the combination of the “subject results” word documents and independent word query documents for common trends and themes are below.

Government Reports

Presented first is the category of government reports as it provides a baseline on the status of the DAS and USAF program managers. Additionally, this category also provides what the government is saying on what the way ahead for resolution of the acquisition crisis may be. Table 2 in Appendix C, shows the relevant summary of references created by the use of auto coding software in NVivo.

By combining the results of the “subject term” documents to the results of the word query documents for this category the following trends and themes emerged from the research. The primary theme relevant to this thesis is the agreement across the board that an overhaul of the DAS is required. The current “way of doing business” is unsustainable in the current fiscal environment. Instability of funding across multiple years creates increased risk, which translates into increased contract costs. Related to this is the issue of the unwieldy acquisition process. The government reports show trends of programs extended because of all the requirements for completing the acquisitions process, long schedules translate into increased costs.

The last key aspect presented in this category is the themes presented by government reports based upon surveys of the program managers themselves. At all levels of program management there is a consistent message that they do not feel empowered to run their programs. However, government program managers are rarely accountable for program results. This was opposite of their non-government counterparts, who were empowered but also held accountable.

Acquisition Issues

The category of acquisition issues provides a wide range of subject terms. Use of the secondary research questions helps to limit the scope of material covered. In addition, for this thesis, the definition of the acquisition crisis focuses upon the historical trends of cost overruns; therefore, the conduction of an additional analytical analysis was in this area. Table 3 in Appendix C, shows a limited summary of references created by the use of auto coding software in NVivo.

By combining the results of the “subject term” documents to the results of the word query documents for this category the following trends and themes emerged from the research. The main trend prevalent throughout the information research was the issue of program cost overruns. By breaking the information into three areas; industry expertise, non-DoD governmental opinion, and DoD acquisition leadership, all three areas agree the current DAS has significant issues especially when related to cost. The opinions as to the causes of these overruns varied and no one area had any specific trend of concurrence among the associated people. A categorization of the different opinions on why there are cost overruns is below.

The first category for cause of cost overruns is in requirements and instability in the programs requirement documents. The requirements for programs tend to grow throughout the acquisition process mainly because of a request for new or unforeseen requirements different from the original requirements at program initiation. The next category of cost overrun cause is in the actual development contract used by the program. Problems here can stem from improper contract type selection, inadequate or vague contract language, and manpower turnover on long-term contract management.

The last category for concern with cost overruns is in the acquisition process itself. This area was the most universal among all the experts as to being a driving factor in program cost growth. The common trend noted here in research was the often-mentioned cumbersome nature of the DoD acquisition process. Prevailing opinion in all three areas of opinions was an overhaul or at least a streamlining of the DoD acquisition process would be required to achieve any path forward on minimizing cost overruns.

Empowerment Research

The area of empowerment research provided several trends and themes. First, using the query tools of NVivo specifically focused on the empowerment research category, the majority of research shows empowerment works. In all but a few examples, empowerment positively affected job satisfaction, performance, and commitment from the employees. Table 4 in Appendix C, shows a limited summary of references created by the use of auto coding software in NVivo.

The results of the “subject term” documents for this category the following trends and themes of innovation, leadership, and model, emerged from this research. Further research into these areas provides a range of subjects on different empowerment methods

and models. By combining these subjects with the independent word queries, three themes, which relate to USAF program managers, emerge. First, empowerment requires multiple years of stable funding. Second, empowerment requires uninterrupted leadership continuity. Lastly, empowerment requires the transition of authority to the program manager from senior leadership.

Government Regulations

The category of government regulations proved to be the most difficult to analyze for any trends or themes. After the initial breakout of all data into the five categories, the area of governmental regulations was unable to be further broken down into meaningful subject terms. Table 5 in Appendix C, shows a limited summary of references created by the use of auto coding software in NVivo, however, the data in those categories was all directive in nature and covered in detail in chapter 2.

Analysis of the data input into the government regulations category showed no additional information than that which was already covered in chapter 2. The same is true for the independent analysis of the key term queries; no additional information provided more insights. Therefore, this category will provide input into the secondary research question of the feasibility, acceptability, and suitability of any proposed empowerment methods the USAF can use.

Expert Testimony

The category of expert testimony provides a diverse view of the DAS and what issues or problems exist along with possible solutions. Of specific note in this category, also addressed in chapter 2, is the document *Defense Acquisition Reform, Where do we*

*go from here.*⁹¹ This document provides views of 31 senior acquisition professionals and is a baseline document on the current state of DoD acquisitions. Table 6 in Appendix C, shows a limited summary of references created by the use of auto coding software in NVivo.

By combining the results of the “subject term” documents to the results of the word query documents for this category the following trends and themes emerged from the research. First were the multiple discussions on the individual program managers. Consensus among the experts pointed to a lack of effective program manager training, issues with the longevity of program managers, especially with relation to the military program managers, and lack of authority of the program manager over the entire effort. The expert testimony also echoed the government report section with respect to funding instability.

Of primary importance within this category’s multiple trends and themes was the discussion of possible solutions to the crisis. The solutions can be condensed into three main themes; program manager longevity, accountability, and increased training. These three themes are personnel oriented and will require changes in the management of DoD program managers.

Lastly, because of the importance of this category, the results of this categorization were also analyzed using another built in NVivo analysis tool, sentiment coding. Sentiment coding takes input data and codes the text as either very positive,

⁹¹ Senate Permanent Subcommittee on Investigations, *Defense Acquisition Reform: Where do we go from here? A Compendium of Views by Leading Experts*, 113th Cong., 1st sess., 2014, S. Rep., 1.

moderately positive, moderately negative, very negative. Similar to the results of the “subject term” reports these reports were pages long and therefore not included within this thesis. However, some generalizations are below from results of the coded data.

The sentiment coding of negative responses generally centered on opinions of the current state of the DAS and associated processes, or the history of the success of the DAS. The only caveat to these responses is more recent data showed a trend of negative sentiment when speaking about the affects sequestration had upon the acquisition process. The sentiment coding of positive responses mostly centered on the consensus of generalized process oriented themes about ways to resolve the acquisition crisis. These two themes, new innovative processes, and streamlined acquisitions requirements relate back to three themes expressed early about possible solutions. Combination of these five themes show the expert opinion about the DAS; it is a system in need of overhaul.

Summary

The use of a qualitative research software was very beneficial to the data analyzation of this thesis. Use of the NVivo software to initially code and categorize the data provided a logical classification of data into corresponding research areas. These research areas provided a consolidated location for relevant information allowing the generation of common themes and trends across multiple data sources.

Chapter 5 provides the conclusion these results; however, two important aspects need addressing prior. First, the commonality among the data results from the government reports, acquisition issues, and expert testimony categories. These three categories provide three different views on the topic of USAF acquisitions. The government report category provides information derived from quantitative reports and

surveys and is the data presented is independent from opinion. The category of expert testimony is strictly from opinions of senior acquisition personnel from within and outside the government. The category of acquisition issues combines both opinions and quantitative data results into a single area of study. Combination of all three of these categories provides a comprehensive overview of the data researched on the topic of USAF program managers and their impact to the acquisition crisis.

The second aspect is on the empowerment of program managers. While there was direction from congress to empower DoD program managers, there was no exclusive data found, which provided justification that empowerment was the solution to the acquisition crisis. Consideration to both of these aspects is required when looking at the empowerment of USAF program managers, and how their empowerment may affect government acquisition operations.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter will discuss the conclusions from the data analysis results, covered in chapter four. This chapter will first address the primary and secondary research questions. Following will be a discussion on recommendation based upon the results of this research. Last will be some final thoughts on the topic of program manager empowerment as a whole.

Conclusions

Primary Research Question

Will empowerment of USAF program managers mitigate the acquisition crisis?

Yes, based upon the recommendations of senior DoD acquisition leadership, industry expertise, and the results empowerment research, empowerment will work.

Empowerment of program managers answers many of the issues and problems addressed within this thesis. Empowerment holds the program manager accountable for program results while at the same time giving them the authority to manage their program.

Empowerment addresses many of the issues noted in categories of government reports, acquisition issues, and expert testimony. The results of research into the category of empowerment research show the resolution of similar issues noted in non-government program management by the implementation of empowerment. Lastly, presented, as solutions to acquisition issues by many of the experts, are the themes of empowerment itself or themes similar to empowerment. All of this shows a consensus among the acquisition community that empowerment is required.

Secondary Research Questions

What methods can the USAF use to empower its program managers to mitigate the ongoing acquisition crisis? Of the three research questions this one is the most difficult to answer. The best answer is a generalization based upon the definition of empowerment. The USAF can empower their program managers through the delegation of program authority from the Program Executive Officer to the program manager. Any specifics as to the exact method used will need to pass the secondary research question. In addition, based upon the research conducted and results discussed in chapter 4, all current empowerment methods will require some level of policy changes within the service and within the DAS.

Are the empowerment methods feasible, suitable, and acceptable for incorporation into the USAF acquisition process? Currently the empowerment methods recommended are not feasible for incorporation into current USAF acquisition processes. This is for several reasons as discussed in both the literature review and in chapter 4. The results from chapter 4 in the area of empowerment research show a trend of empowerment methods used by commercial entities requiring three common themes. None of these three themes; stability of funding, transition of authority, and uninterrupted program management are possible under the current DAS.

The suitability of a method of empowerment will depend upon the specific method chosen. However, a couple generalizations can be made to answer the question. For any method to be suitable, the method will require either conformance to current acquisition policy or prior change to policy. In addition, the method chosen will need to

ensure the overall promotion potentials of the program manager is either not negatively affected or accounted for through other means.

Lastly, the acceptability of empowerment is also possible. First, as noted previously congress has mandated the empowerment of program managers.⁹² Based upon results of chapter 4, acquisition leadership within the DoD is also recommending increased responsibility of DoD program managers. Therefore, with both sides of the acquisition process, the regulatory and enact sides, saying the same thing, empowerment is an acceptable solution to help solve the acquisition crisis.

Recommendations

Empowerment of program managers is a complex topic and when restricted within the DAS and service unique constraints, empowerment becomes a sensitive subject. This thesis only scratches the surface of understanding the impact of empowerment on USAF program managers. Taking the current acquisition environment into account some further areas of research and study would be:

1. Is Congress willing to change congressional funding laws for acquisitions?
2. Can the USAF Manpower management provide a way for military program managers to be competitive for promotions while maintaining program continuity?
3. At what management level is empowerment for program managers to be implemented?

⁹² National Defense Authorization Act, 3-4.

These three questions will continue to shape the environment for the continual improvement of USAF program managers.

Final Thoughts

Throughout the research and writing of this thesis, two things stand out. First, while the issues plaguing the DAS are relevant across all the services, within the DoD the solutions presented will require different implementation. Specifically for the USAF, who as a service brings their military acquisition professionals into the career field as junior officers, some unique possible mitigations strategies may exist. For instance, similar to the warrant system which contracting officers use, a “warrant” system for program managers starting at the basic level may provide the additional training and expertise senior acquisition leadership says is missing. By allowing a junior program manager a low cost program from inception to completion, and to be held accountable for their efforts, may grow a senior acquisition professional who can navigate the DAS.

The second, there is no apparent “silver bullet cure all” solution to the current acquisition crisis. History shows similar problems throughout the decades with some successes and some failures. No solution will be effective in all situations, especially solutions oriented on process only. Program manager empowerment appears to be a good start on the path to correcting the acquisition crisis, if given the time, resources, and senior leader support to succeed.

APPENDIX A

SENATE REPORT ON ACQUISITION REFORM

THOMAS R. CARPER, DELAWARE, CHAIRMAN
CARL LEVIN, MICHIGAN
MARK L. PRYOR, ARKANSAS
MARY L. LANDRIEU, LOUISIANA
CLARE McCASKILL, MISSOURI
JON TESTER, MONTANA
MARK BEGICH, ALASKA
TAMMY BALDWIN, WISCONSIN
HEIDI HEITKAMP, NORTH DAKOTA
TOM COBURN, OKLAHOMA
JOHN MCCAIN, ARIZONA
RON JOHNSON, WISCONSIN
ROB PORTMAN, OHIO
RAND PAUL, KENTUCKY
MICHAEL B. ENZI, WYOMING
KELLY AYOTTE, NEW HAMPSHIRE

United States Senate

COMMITTEE ON
HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

WASHINGTON, DC 20510-6250

April 16, 2014



Dear [REDACTED]:

Every year, the Department of Defense (DOD) spends billions of dollars to acquire major weapons systems. Over the last twenty or so years, much has been said about how the DOD must reform how it procures major weapon systems and associated products and services. Despite the significant improvements made in the Weapon Systems Acquisition Reform Act and other recent acquisition reform legislation, inefficient, outdated, and (at times) imprudent practices continue to result in unnecessary waste. With the continuing likelihood of shrinking defense budgets requiring that DOD find a way to do more with less, there is more need than ever for the savings that would result from further acquisition improvements.

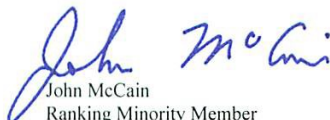
Against this backdrop, the Senate Permanent Subcommittee on Investigations intends to publish a compendium of views and insights of our country's leading experts on defense acquisition reform, in a print entitled *Defense Acquisition Reform: Where Do We Go From Here? A Compendium of Views by Leading Defense Experts*. The print will consist of five primary areas including: (1) Culture & Accountability; (2) Acquisition Policy; (3) Procurement Policy; (4) Budgeting & Resource Allocation; and (5) Requirements Process.


We invite you to provide us with your views as to the deficiencies in the defense acquisition process, the steps that should be taken to improve the efficiency and effectiveness of this process, and the extent to which recent legislative and policy reforms may have resulted in improvement to the system. To enable us to compile and understand the answers we receive, we are providing a list of more specific questions to guide your consideration of these issues. We ask that you submit an essay in response to the attached questions of five pages maximum-length (12pt font, single-spaced) to be included in the publication and request that your submission address some or all of the attached questions.

Please submit your contribution by **May 27, 2014** via e-mail to Brad Patout at [REDACTED]. Should you have any questions, please feel free to contact Mr. Patout or Moshe Schwartz, who will be supporting the Subcommittee's efforts, at [REDACTED].

We look forward to your contribution and thank you in advance for your time.

Sincerely,


John McCain
Ranking Minority Member
Permanent Subcommittee on Investigations


Carl Levin
Chairman
Permanent Subcommittee on Investigations

Attachment



DEFENSE ACQUISITION REFORM COMPENDIUM

Culture and Accountability

1. What steps would you recommend to change the culture within the acquisition workforce to increase cost consciousness and pursue affordability as an operational requirement?
2. What steps would you recommend to develop the core competencies of the acquisition workforce and make it more capable of obtaining better value for the taxpayer—becoming as skilled a buyer as private industry is a seller?
3. What is your assessment of the Defense Acquisition Workforce Development Fund (DAWDF)? Do you believe that the DAWDF should be continued? Would you recommend any changes to the structure or function of the DAWDF?
4. How can the DOD better empower PMs and PEOs to make sound program management decisions and ensure accountability? Should the DOD restructure how PMs and PEOs are transitioned in and out of programs in relation to key decision points?
5. Do you believe that the qualification requirements established by the Defense Acquisition Workforce Improvement Act (DAWIA) are working, or would you recommend additional requirements or better enforcement of existing requirements enhance the performance of the acquisition workforce? What steps would you recommend to improve the qualifications of acquisition personnel holding key leadership positions or otherwise ensure that members of the acquisition workforce are fully qualified to meet their responsibilities?
6. What steps would you recommend to help ensure that top performers within the acquisition workforce are rewarded for their performance and empowered to manage programs with success?
7. What steps would you recommend to improve the recruitment, hiring, and retention of talented and capable mid- and senior-level executives to fill the growing number of highlevel vacancies within the DOD acquisition workforce?

Please feel free to provide insight on any other related policy areas that are not expressly covered by the foregoing questions.

DEFENSE ACQUISITION REFORM COMPENDIUM

Acquisition Policy

1. What changes would you recommend to the statutes, regulations, and policies governing DOD acquisition of major weapon systems to ensure that major weapon systems are delivered on time, at a reasonable cost, and provide the needed capability? For any recommended changes, please specify the statute, regulation, or policy and the precise change that you would recommend.
2. Do you see the need for any change to the current acquisition chain of command for our largest major defense acquisition programs, under which program managers report to program executive officers, who report to service acquisition executives, who report to the Under Secretary of Defense for Acquisition, Technology, and Logistics? What changes if any would you recommend to the role of the service chiefs in this process, as outlined in section 2547 of title 10, United States Code?
3. What changes if any would you recommend to how DOD tests major weapon systems to ensure that they will be delivered to combatant commanders on time, at a reasonable cost, and with the required capability? Do you support the concept of “fly before you buy” for major defense acquisition programs?
4. What changes would you recommend to ensure that DOD better addresses concurrency risk in the design, development, test, and production of major weapons systems to help ensure that they are not being procured while important design and/or testing activities are still ongoing? What is your view of the use of the requirement for prototypes, and where appropriate, competitive prototypes? What steps would you recommend to improve the transition of new technologies into major weapon systems?
5. What changes would you recommend to the process by which DOD identifies and mitigates risk (including but not limited to technological-, integration-, and manufacturing-risk) early in the lifecycle of major weapon systems? Is the Department making appropriate use of technology readiness levels and similar measures in the acquisition process?
6. What changes would you recommend to ensure that better accounts for full life-cycle costs, including the operation and sustainment costs, in the acquisition of major weapon systems?
7. To what extent should the DOD encourage the use of “time-certain development,” “spiral development” and “incremental acquisition” strategies to procure major weapons systems? Should the acquisition process itself be shortened to reduce the

decision-making cycle time and overhead costs associated with the acquisition of major weapons systems? If yes, how?

Please feel free to provide insight on any other related policy areas that are not expressly covered by the foregoing questions.

DEFENSE ACQUISITION REFORM COMPENDIUM

Procurement Policy

1. What changes would you recommend to the statutes, regulations, and policies governing DOD procurement of major weapon systems to reduce the cost of contracts for major weapon systems and associated products and services? What additional changes would you recommend to ensure that non-traditional contractors are willing to enter the defense market? For any recommended changes, please specify the statute, regulation, or policy and the precise change that you would recommend.
2. What changes would you recommend to how DOD negotiates contracts for major weapon systems and associated products and services to ensure that the Department gets the benefit of reasonable prices for such contracts? What changes would you recommend to DOD's implementation of "should cost"-based management approaches to control costs associated with major defense acquisition programs and associated products and services?
3. What changes would you recommend to how DOD manages and oversees the performance of contracts for major weapon systems and associated products and services to ensure the efficient execution of such contracts at a reasonable cost?
4. What changes would you recommend to ensure that contractors' profits on major weapons programs align sufficiently with a contractor's performance?
5. Is the Department making appropriate use of fee-types and contract geometry? Aside from deciding on fee-type and contract geometry, what changes would you recommend to more effectively incentivize contractors to deliver these major weapons systems on time, at a reasonable cost, and with the needed capability?
6. What improvements would you recommend to DOD's use of Performance Based Logistics (PBL) contracts for the sustainment of major weapon systems?

Please feel free to provide insight on any other related policy areas that are not expressly covered by the foregoing questions.

DEFENSE ACQUISITION REFORM COMPENDIUM

Budgeting and Resource Allocation

1. What steps would you recommend to improve the resource allocation process that supports the DOD's acquisition of major weapons systems? What additional processes or mechanisms if any are needed to ensure coordination between the budget, acquisition, and requirements systems of the Department of Defense and ensure that appropriate trade-offs are made between cost, schedule, and performance requirements early in the acquisition process?
2. What steps would you recommend to maximize funding stability conducive to the DOD's planning, programming and budgeting for the acquisition of major weapon systems? What is your view of multi-year contracts, and when they should appropriately be used?
3. What steps would you recommend to ensure that DOD has the budget flexibility it needs to respond to emerging requirements and changed circumstances?
4. What changes to the resource allocation process would you recommend to improve the prioritization of requirements and ensure that DOD budgets are more effectively aligned with increasingly diminishing resources?
5. What changes would you recommend to the manner in which DOD presents information in its annual budget submissions, including the Future Years Defense Program (FYDP), including information on force structure, end-strength, modernization, and readiness levels, to enhance oversight of major weapons systems costs?
6. Do you believe that the DOD's current budget strategy for the acquisition of major weaponssystems is affordable given historic cost growth in major weapons systems, costs of current operations, the continuing need for asset recapitalization, and pressure for unrelated "legacy" costs, including healthcare?

Please feel free to provide insight on any other related policy areas that are not expressly covered by the foregoing questions.

DEFENSE ACQUISITION REFORM COMPENDIUM

Requirements Process

1. What changes if any would you recommend to the Joint Capabilities and Integration Development System (JCIDS) process and the role of the Joint Requirements Oversight Council (JROC) in the requirements process to ensure that major weapons

systems are affordable, reliable, and responsive to the operational needs of the combatant commanders?

2. What changes to the acquisition process would you recommend to reduce the risk of requirements creep, or “gold-plating”, in connection with the acquisition of major weapons systems?
3. To what extent should the combatant commanders play more of a role than they do today in the requirements process? What changes if any would you recommend to the role played by combatant commanders?
4. What changes to the requirements process would you recommend to ensure that operational requirements that are needed rapidly by combatant commander within their area of responsibility are satisfied in a timely manner? What changes would you recommend to address the risk that rapid acquisition could result in the proliferation of systems that will be difficult to maintain?
5. What improvements can be made in the DOD’s use of market research in the requirements process to maximize small business participation in the acquisition of major weapons systems and associated products and services? How can we assure that small business innovations are effectively incorporated into major weapon systems?
6. What changes would you recommend to ensure the appropriate consideration of open-system architecture and the proper management of intellectual property rights in the acquisition of major weapon systems and associated technologies?
7. What is your view of Configuration Steering Boards? What steps would you recommend to make Configuration Steering Boards more effective in controlling the growth of requirements?
8. In connection with how the DOD generates and reassesses requirements throughout the lifecycle of a major weapons system, what improvements, if any, can be made to how the DOD manages the trade space among the cost, schedule, and performance parameters of those systems to ensure its overall affordability?

Please feel free to provide insight on any other related policy areas that are not expressly covered by the foregoing questions.

	Contributor	Additional workforce training needed	Align personnel tenure with key decision points	Attain realistic cost estimates early in the process	Attract and retain quality workforce	Culture change	Define and stabilize requirements early in the process	Encourage Innovation	Improve budget process	Improve leadership & accountability	Incentivize cost control	Prototyping / concurrency risk	Refine GoldwaterNichols	Reintegrate Service Chiefs	Testing / "Fly Before You Buy"				
1	Anderson, Frank	X	X		X	X													
2	Augustine, Norman		X		X	X	X			X	X	X	X	X					
3	Berteau, David	X	X		X		X	X			X		X		X				
4	Blickstein, Irv	X	X		X			X	X	X			X	X					
5	Cartwright, James	X			X		X	X							X				
6	Christie, Thomas	X		X		X	X		X	X		X	X		X				
7	Etherton, Jonathan	X			X	X	X	X	X	X	X			X					
8	Fox, Christine	X	X	X	X	X	X		X		X								
9	Fox, J. Ronald	X	X	X	X	X					X	X			X				
10	Francis, Paul	X	X	X	X	X				X	X	X			X				
11	Gansler, Jacques	X		X	X				X	X	X								
12	Gilmore, J. Michael	X		X			X		X	X	X	X			X				
13	Gordon, Daniel	X			X	X	X	X		X	X								
14	Greenwalt, William	X			X			X		X	X	X			X				
15	Harrison, Todd							X			X								
16	Jonas, Tina			X	X				X										
17	Kaminski, Paul	X			X		X	X			X	X		X	X				
18	Kendall, Frank	X			X			X			X								
19	Lehman, John					X				X	X								
20	McGrath, Elizabeth	X	X						X		X								
21	McNicol, David			X		X			X										
22	Morin, Jamie			X			X		X	X	X								
23	Oliver, David	X			X	X				X	X		X	X					
24	Roughhead, Gary						X	X	X	X		X		X	X				
25	Schinasi, Katherine	X			X	X	X			X	X								
26	Schwartz, Norton		X		X	X	X	X	X	X	X		X	X					
27	Stackley, Sean	X		X	X		X	X	X	X	X		X						
28	Sullivan, Michael	X	X	X	X		X		X	X	X	X							
29	Venlet, David	X		X	X										X				
30	Ward, Daniel					X				X	X								
31	Zakheim, Dov	X	X		X			X	X	X				X					
				22 15			11 19			12 22			14 9			15 8			13 10
				70.97%			35.48%			38.71%			70.97%			45.16%			41.94%
				48.39%			61.29%			70.97%			29.03%			22.58%			32.26%
Note: While contributors were given specific sets of topic questions based on their expertise, it was at the contributor's discretion to choose what issue areas to discuss. Those question sets are provided in Appendix B.																			

CULTURE AND ACCOUNTABILITY															
	Contributor	Additional workforce training needed	Align personnel tenure with key decision points	Attain realistic cost estimates early in the process	Attract and retain quality workforce	Culture change	Define and stabilize requirements early in the process	Encourage Innovation	Improve budget process	Improve leadership & accountability	Incentivize cost control	Prototyping / concurrency risk	Refine Goldwater/Nichols	Reintegrate Service Chiefs	Testing / "Fly Before You Buy"
1	Anderson, Frank	X	X		X	X									
2	Augustine, Norman		X		X	X	X			X	X	X	X	X	
3	Christie, Thomas	X		X		X	X		X	X		X	X		X
4	Etherton, Jonathan	X			X	X	X	X	X	X	X			X	
5	Fox, Christine	X	X	X	X	X	X		X		X				
6	Fox, J. Ronald	X	X	X	X	X					X	X			X
7	Francis, Paul	X	X	X	X	X				X	X	X			X
8	Gordon, Daniel	X			X	X	X	X		X	X				
9	Kendall, Frank	X			X			X			X				
10	McGrath, Elizabeth	X	X						X		X				
11	Oliver, David	X			X	X				X	X		X	X	
12	Schinasi, Katherine	X			X	X	X			X	X				
13	Schwartz, Norton		X		X	X	X	X	X	X	X		X	X	
14	Sullivan, Michael	X	X	X	X		X		X	X	X	X			
15	Venlet, David	X		X	X										X
					13	8		6		13		11		8	4
					4	6		9		12		5		4	4
					86.67%	53.33%		40.00%		86.67%		73.33%		53.33%	26.67%
					26.67%	40.00%		60.00%		80.00%		33.33%		26.67%	26.67%
Note: While contributors were given specific sets of topic questions based on their expertise, it was at the contributor's discretion to choose what issue areas to discuss. The contributors listed above were provided the Culture & Accountability question set, which are provided in Appendix B.															

ACQUISITION POLICY															
	Contributor	Additional workforce training needed	Align personnel tenure with key decision points	Attain realistic cost estimates early in the process	Attract and retain quality workforce	Culture change	Define and stabilize requirements early in the process	Encourage Innovation	Improve budget process	Improve leadership & accountability	Incentivize cost control	Prototyping / concurrency risk	Refine GoldwaterNichols	Reintegrate Service Chiefs	Testing / "Fly Before You Buy"
1	Augustine, Norman		X		X	X	X			X	X	X	X	X	
2	Blickstein, Irv	X	X		X			X	X	X			X	X	
3	Christie, Thomas	X		X		X	X		X	X		X	X		X
4	Fox, Christine	X	X	X	X	X	X		X		X				
5	Fox, J. Ronald	X	X	X	X	X					X	X			X
6	Francis, Paul	X	X	X	X	X				X	X	X			X
7	Gansler, Jacques	X		X	X				X	X	X				
8	Gilmore, J. Michael	X		X			X		X	X	X	X			X
9	Greenwalt, William	X			X			X		X	X	X			X
10	Kaminski, Paul	X			X		X	X			X	X		X	X
11	Kendall, Frank	X			X			X			X				
12	Lehman, John					X				X	X				
13	McGrath, Elizabeth	X	X						X		X				
14	McNicol, David			X		X			X						
15	Oliver, David	X			X	X				X	X		X	X	
16	Roughead, Gary						X	X	X	X		X		X	X
17	Schwartz, Norton		X		X	X	X	X	X	X	X		X	X	
18	Stackley, Sean	X		X	X		X	X	X	X	X		X		
19	Sullivan, Michael	X	X	X	X		X		X	X	X	X			
20	Ward, Daniel					X				X	X				
					14		8		9		13		10		7
					11		14		16		9		6		7
					70.00%		40.00%		45.00%		65.00%		50.00%		35.00%
					55.00%		70.00%		80.00%		45.00%		30.00%		35.00%
Note: While contributors were given specific sets of topic questions based on their expertise, it was at the contributor's discretion to choose what issue areas to discuss. The contributors listed above were provided the Acquisition Policy question set, which are provided in Appendix B.															

PROCUREMENT POLICY															
	Contributor	Additional workforce training needed	Align personnel tenure with key decision points	Attain realistic cost estimates early in the process	Attract and retain quality workforce	Culture change	Define and stabilize requirements early in the process	Encourage Innovation	Improve budget process	Improve leadership & accountability	Incentivize cost control	Prototyping / concurrency risk	Refine GoldwaterNichols	Reintegrate Service Chiefs	Testing / "Fly Before You Buy"
1	Anderson, Frank	X	X		X	X									
2	Etherton, Jonathan	X			X	X	X	X	X	X	X			X	
3	Gansler, Jacques	X		X	X				X	X	X				
4	Gordon, Daniel	X			X	X	X	X		X	X				
5	Greenwalt, William	X			X			X		X	X	X			X
6	Kendall, Frank	X			X			X			X				
7	Stackley, Sean	X		X	X		X	X	X	X	X		X		
					7 5		1 3		2 5		7 6		3 1		3 1
					100.00%		14.29%		28.57%		100.00%		42.86%		42.86%
					71.43%		42.86%		71.43%		85.71%		14.29%		14.29% 14.29
					%										
Note:															
While contributors were given specific sets of topic questions based on their expertise, it was at the contributor's discretion to choose what issue areas to discuss. The contributors listed above were provided the Procurement Policy question set, which are provided in Appendix B.															

BUDGETING AND RESOURCE ALLOCATION															
	Contributor	Additional workforce training needed	Align personnel tenure with key decision points	Attain realistic cost estimates early in the process	Attract and retain quality workforce	Culture change	Define and stabilize requirements early in the process	Encourage Innovation	Improve budget process	Improve leadership & accountability	Incentivize cost control	Prototyping / concurrency risk	Refine GoldwaterNichols	Reintegrate Service Chiefs	Testing / "Fly Before You Buy"
1	Berteau, David	X	X		X		X	X			X		X		X
2	Fox, Christine	X	X	X	X	X	X		X		X				
3	Harrison, Todd							X			X				
4	Jonas, Tina			X	X				X						
5	Kendall, Frank	X			X			X			X				
6	Lehman, John					X				X	X				
7	McNicol, David			X		X			X						
8	Morin, Jamie			X			X		X	X	X				
9	Oliver, David	X			X	X				X	X		X	X	
10	Stackley, Sean	X		X	X		X	X	X	X	X		X		
11	Zakheim, Dov	X	X		X			X	X	X				X	
					6		3		5		7		4		5
					6		5		8		0		3		1
					54.55%		27.27%		45.45%		63.64%		36.36%		45.45%
					54.55%		45.45%		72.73%		0.00%		27.27%		9.09%
Note: While contributors were given specific sets of topic questions based on their expertise, it was at the contributor's discretion to choose what issue areas to discuss. The contributors listed above were provided the Budgeting & Resource Allocation question set, which are provided in Appendix B.															

REQUIREMENTS PROCESS															
	Contributor	Additional workforce training needed	Align personnel tenure with key decision points	Attain realistic cost estimates early in the process	Attract and retain quality workforce	Culture change	Define and stabilize requirements early in the process	Encourage Innovation	Improve budget process	Improve leadership & accountability	Incentivize cost control	Prototyping / concurrency risk	Refine Goldwater-Nichols	Reintegrate Service Chiefs	Testing / "Fly Before You Buy"
1	Berteau, David	X	X		X		X	X			X		X		X
2	Blickstein, Irv	X	X		X			X	X	X			X	X	
3	Cartwright, James	X			X		X	X							X
4	Kaminski, Paul	X			X		X	X			X	X		X	X
5	McGrath, Elizabeth	X	X						X		X				
6	Roughead, Gary						X	X	X	X		X		X	X
7	Schwartz, Norton		X		X	X	X	X	X	X	X		X	X	
8	Sullivan, Michael	X	X	X	X		X		X	X	X	X			
9	Venlet, David	X		X	X										X
10	Ward, Daniel					X				X	X				
					7		5		2		7		2	6	
					6		5		5		6		3	3	
					4		5								
					70.00%		50.00%		20.00%		70.00%		20.00%	60.00%	60.00%
					50.00%		50.00%		60.00%		30.00%		30.00%	40.00%	50.00%
Note: While contributors were given specific sets of topic questions based on their expertise, it was at the contributor's discretion to choose what issue areas to discuss. The contributors listed above were provided the Requirements Process question set, which are provided in Appendix B.															

APPENDIX B

NVIVO CATEGORY SYNCRONIZATION MATRIX

This table represents all of the different data sources used for this research. The columns represent the different categories of data research. The rows are each individual document and what categories of research they were included within for research.

<u>Title</u>	<u>Government Reports</u>	<u>Acquisition Issues</u>	<u>Empowerment Research</u>	<u>Government Regulations</u>	<u>Expert Testimony</u>
2005 Managing Acquisition Risk		X			
2009 CNA AF Acquisition Return		X			
2009 Major Causes of Cost Growth		X			
2010 How Well are PMs Doing		X			X
2010 Industry Perceptions of DoD		X			X
2011 Defense Acq DoD Can Improve	X	X			
2011 PM Professionalization		X			X
2011 Review of DoD PMs	X	X			X
2011 Straight Talk Major PM Views	X	X			X
2013 AF needs beter processes	X	X			X
2013 Performance Defense Acq System	X	X			X
2014 Comparison of Gov & Industry		X			X
2014 Performance Defense Acqu System	X	X			X
2014 Are you truly all		X			X
2014 Critical Thinking		X			X
2015 Acq Reform DoD Decision	X	X			
2015 Performance Defense Acq System	X	X			X
2015 What PMs need to know		X			X
2015 Tailoring the Acquisition		X			X
5000.02				X	

Acq Reform Where do we go					X
AFI 63-101				X	
AFPD 63-1				X	
Augustine					X
BetterBuying Power 3.0				X	
CFETP63AX				X	
Employee Empowerment			X		
FitzGerald					X
Gansler					X
GAO 08-62R	X				
GAO 2006 Report	X				
GAO Report 2015	X				
Gates Acq Memo		X			X
Guidebook for Acq of Services				X	
HASC-Thornberry Letter		X			X
Help my team won't accept			X		
H RTP-114-OCJR				X	
IEEE Crisis					X
IEEE Presidential Advice					X
IEEE Weapons Acq Crisis					X
Kendall Article					X
LePlante					X
Namasivayam Guchait Lei			X		
Reform of the DAS		X			X
Report to Congree PM Empowerment	X		X		
Research on Empowerment at Work			X		
Shyu					X
Stackley					X
USD-ATL Memo BBP 2.0				X	
Ward					X
Work Empowerment ECAM			X		

Source: Created by Author.

APPENDIX C

NVIVO RESULTS BY CATEGORY

These tables represent the relevant results from the auto coding function within NVivo. The column titles are the common trends and themes found within the category of that table. The numbers in each column represent the number of times that the applicable trend or theme appeared within the documents coded within the table category. For example, the term cost appeared 134 times throughout all the applicable data within the category of Government Reports.

Government Reports Category Limited Summary of Results

	Contract	Cost	Development	Process	Requirements
Total number of References	143	134	84	85	101

Source: Created by Author with use of NVivo.

Acquisition Issues Category Limited Summary of results

	Contract	Cost	Performance	Process	Requirements
Total number of References	196	174	103	124	135

Source: Created by Author with use of NVivo.

Empowerment Research Category Limited Summary of Results

	Commitment	Innovative	Leadership	Model	Performance	Satisfaction
Total number of References	28	22	50	30	58	99

Source: Created by Author with use of NVivo.

Government Regulations Category Limited Summary of Results

	Capability	Cost	Decision	Planning	Requirements	Support
Total number of References	49	53	33	41	96	33

Source: Created by Author with use of NVivo.

Expert Testimony Category Limited Summary of Results

	Budget	Changes	Contract	Cost	Process	Requirements	System
Total number of References	164	162	265	354	253	287	376
Acquisition Reform* ⁹³	107	81	71	187	141	155	216

* Document totals as a standalone document

Source: Created by Author with use of NVivo.

⁹³ Senate Permanent Subcommittee on Investigations, Defense Acquisition Reform: Where do we go from here? A Compendium of Views by Leading Experts, 113th Cong., 1st sess., 2014, S. Rep., 1.

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